

SEQUENCE LISTING

<110> JOANNE CHORY AND ZHIYONG WANG

<120> GENES INVOLVED IN BRASSINOSTEROID
HORMONE ACTION IN PLANTS

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			260					265					270		
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		275					280					285			
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	290				295					300					
Glu	Asn	Ser	Gln	Val	Lys	Pro	Trp	Glu	Gly	Glu	Arg	Ile	His	Asp	Val
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 <212> PRT
 <213> AMINO ACID

<400> 7

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			20					25				30			
Asn	Arg	Arg	Arg	Glu	Arg	Arg	Arg	Arg	Ala	Val	Ala	Ala	Lys	Ile	Tyr
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Thr	Gly	Leu	Arg	Ala	Gln	Gly	Asp	Tyr	Asn	Leu	Pro	Lys	His	Cys	Asp
	50				55					60					
Asn	Asn	Glu	Val	Leu	Lys	Ala	Leu	Cys	Val	Glu	Ala	Gly	Trp	Val	Val
65				70					75					80	
Glu	Glu	Asp	Gly	Thr	Tyr	Arg	Lys	Gly	Cys	Lys	Pro	Leu	Pro	Gly	
		85					90					95			
Glu	Ile	Ala	Gly	Thr	Ser	Ser	Arg	Val	Thr	Pro	Tyr	Ser	Ser	Gln	Asn
	100						105					110			
Gln	Ser	Pro	Leu	Ser	Ser	Ala	Phe	Gln	Ser	Pro	Ile	Pro	Ser	Tyr	Gln
	115					120					125				
Val	Ser	Pro	Ser	Ser	Ser	Ser	Phe	Pro	Ser	Pro	Ser	Arg	Gly	Glu	Pro
	130				135					140					
Asn	Asn	Asn	Met	Ser	Ser	Thr	Phe	Phe	Pro	Phe	Leu	Arg	Asn	Gly	Gly
145			150						155					160	
Ile	Pro	Ser	Ser	Leu	Pro	Ser	Leu	Arg	Ile	Ser	Asn	Ser	Cys	Pro	Val
			165					170					175		
Thr	Pro	Pro	Val	Ser	Ser	Pro	Thr	Ser	Lys	Asn	Pro	Lys	Pro	Leu	Pro
	180						185					190			
Asn	Trp	Glu	Ser	Ile	Ala	Lys	Gln	Ser	Met	Ala	Ile	Ala	Lys	Gln	Ser
	195					200				205					
Met	Ala	Ser	Phe	Asn	Tyr	Pro	Phe	Tyr	Ala	Val	Ser	Ala	Pro	Ala	Ser
	210				215				220						
Pro	Thr	His	Arg	His	Gln	Phe	His	Thr	Leu	Ala	Thr	Ile	Pro	Glu	Cys
225				230					235					240	
Asp	Glu	Ser	Asp	Ser	Ser	Thr	Val	Asp	Ser	Gly	His	Trp	Ile	Ser	Phe
			245						250					255	
Gln	Lys	Phe	Ala	Gln	Gln	Gln	Pro	Phe	Ser	Ala	Ser	Met	Val	Pro	Thr
			260					265					270		

Ser	Pro	Thr	Phe	Asn	Leu	Val	Lys	Pro	Ala	Pro	Gln	Gln	Met	Ser	Pro
		275					280					285			
Asn	Thr	Ala	Ala	Phe	Gln	Glu	Ile	Gly	Gln	Ser	Ser	Glu	Phe	Lys	Phe
	290					295					300				
Glu	Asn	Ser	Gln	Val	Lys	Pro	Trp	Glu	Gly	Glu	Arg	Ile	His	Asp	Val
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Gly	Met	Glu	Asp	Leu	Glu	Leu	Thr	Leu	Gly	Asn	Gly	Lys	Ala	Arg	Gly
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		20						25					30		
Arg	Arg	Arg	Glu	Arg	Arg	Arg	Arg	Ala	Val	Ala	Ala	Lys	Ile	Tyr	Thr
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Gly	Leu	Arg	Ala	Gln	Gly	Asn	Tyr	Asn	Leu	Pro	Lys	His	Cys	Asp	Asn
	50					55					60				
Asn	Glu	Val	Leu	Lys	Ala	Leu	Cys	Ser	Glu	Ala	Gly	Trp	Val	Val	Glu
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Glu	Asp	Gly	Thr	Thr	Tyr	Arg	Lys	Gly	His	Lys	Pro	Leu	Pro	Gly	Asp
				85					90					95	
Met	Ala	Gly	Ser	Ser	Ser	Arg	Ala	Thr	Pro	Tyr	Ser	Ser	His	Asn	Gln
		100						105					110		
Ser	Pro	Leu	Ser	Ser	Thr	Phe	Asp	Ser	Pro	Ile	Leu	Ser	Tyr	Gln	Val
		115					120					125			
Ser	Pro	Ser	Ser	Ser	Ser	Phe	Pro	Ser	Pro	Ser	Arg	Val	Gly	Asp	Pro
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His	Asn	Ile	Ser	Thr	Ile	Phe	Pro	Phe	Leu	Arg	Asn	Gly	Gly	Ile	Pro
145					150					155					160
Ser	Ser	Leu	Pro	Pro	Leu	Arg	Ile	Ser	Asn	Ser	Ala	Pro	Val	Thr	Pro
				165					170					175	
Pro	Val	Ser	Ser	Pro	Thr	Ser	Arg	Asn	Pro	Lys	Pro	Leu	Pro	Thr	Trp
		180						185					190		
Glu	Ser	Phe	Thr	Lys	Gln	Ser	Met	Ser	Met	Ala	Ala	Lys	Gln	Ser	Met
		195					200					205			
Thr	Ser	Leu	Asn	Tyr	Pro	Phe	Tyr	Ala	Val	Ser	Ala	Pro	Ala	Ser	Pro
	210					215					220				
Thr	His	His	Arg	Gln	Phe	His	Ala	Pro	Ala	Thr	Ile	Pro	Glu	Cys	Asp
225				230						235					240
Glu	Ser	Asp	Ser	Ser	Thr	Val	Asp	Ser	Gly	His	Trp	Ile	Ser	Phe	Gln
				245					250					255	
Lys	Phe	Ala	Gln	Gln	Gln	Pro	Phe	Ser	Ala	Ser	Met	Val	Pro	Thr	Ser
		260						265					270		
Pro	Thr	Phe	Asn	Leu	Val	Lys	Pro	Ala	Pro	Gln	Gln	Leu	Ser	Pro	Asn
		275					280					285			
Thr	Ala	Ala	Ile	Gln	Glu	Ile	Gly	Gln	Ser	Ser	Glu	Phe	Lys	Phe	Glu
	290					295					300				
Asn	Ser	Gln	Val	Lys	Pro	Trp	Glu	Gly	Glu	Arg	Ile	His	Asp	Val	Ala

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 <212> DNA
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 ttcaagaaaa acatcaagtg gaagaaataa taaaccaaaa ccatcgcaac aaaatgcata 180
 tcacgagtat agaatgaaca aactacactg tcaaataactt aatttaggac ttaaacttcg 240
 ctttcagaca acttggttcg gaaacttgac catccgtcat gttgatatac acaatccatc 300
 tcaaatgtag tagtgaatca ctatatcagc atgtgttatc aaacgcaagt tgtcactaag 360
 atcggagctt ctagtccaat atgttgataa gtattacgaa agtacaattg aatataccaa 420
 ttatacatcc aaacacgtcc atgcttctcc actcgagttc tctttggaaa tctatataat 480
 ccgtcgggtt ggtatttttac tagttgtacg tagtgtctcc cctcatatgt attgagtctt 540
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 aaggggttat ttagttaact tttaacttaa accatgtatc actccatttt acgtatatcc 660
 gttttcacia ataactact aaataatttt gtaatgtgat aaaattaaag aataaacaca 720
 tgatacataa acagtcagga caaaagtaag cactcatttt cttctattca tactatagtg 780
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<211> 335

<212> PRT

<213> Mutant Amino Acid

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			20					25					30				
Arg	Arg	Arg	Glu	Arg	Arg	Arg	Arg	Ala	Val	Ala	Ala	Lys	Ile	Tyr	Thr		
			35				40					45					
Gly	Leu	Arg	Ala	Gln	Gly	Asn	Tyr	Asn	Leu	Pro	Lys	His	Cys	Asp	Asn		
	50					55					60						
Asn	Glu	Val	Leu	Lys	Ala	Leu	Cys	Ser	Glu	Ala	Gly	Trp	Val	Val	Glu		
65					70				75						80		
Glu	Asp	Gly	Thr	Thr	Tyr	Arg	Lys	Gly	His	Lys	Pro	Leu	Pro	Gly	Asp		
				85					90					95			
Met	Ala	Gly	Ser	Ser	Ser	Arg	Ala	Thr	Pro	Tyr	Ser	Ser	His	Asn	Gln		
			100					105					110				
Ser	Pro	Leu	Ser	Ser	Thr	Phe	Asp	Ser	Pro	Ile	Leu	Ser	Tyr	Gln	Val		
		115					120					125					
Ser	Pro	Ser	Ser	Ser	Ser	Phe	Pro	Ser	Pro	Ser	Arg	Val	Gly	Asp	Pro		
		130				135					140						
His	Asn	Ile	Ser	Thr	Ile	Phe	Pro	Phe	Leu	Arg	Asn	Gly	Gly	Ile	Pro		
145					150				155						160		
Ser	Ser	Leu	Pro	Pro	Leu	Arg	Ile	Ser	Asn	Ser	Ala	Pro	Val	Thr	Pro		
				165					170					175			
Pro	Val	Ser	Ser	Pro	Thr	Ser	Arg	Asn	Pro	Lys	Pro	Leu	Pro	Thr	Trp		
			180					185					190				
Glu	Ser	Phe	Thr	Lys	Gln	Ser	Met	Ser	Met	Ala	Ala	Lys	Gln	Ser	Met		
		195					200					205					
Thr	Ser	Leu	Asn	Tyr	Pro	Phe	Tyr	Ala	Val	Ser	Ala	Pro	Ala	Ser	Pro		
		210				215					220						
Thr	His	His	Arg	Gln	Phe	His	Ala	Leu	Ala	Thr	Ile	Pro	Glu	Cys	Asp		
225				230						235					240		
Glu	Ser	Asp	Ser	Ser	Thr	Val	Asp	Ser	Gly	His	Trp	Ile	Ser	Phe	Gln		
				245					250					255			
Lys	Phe	Ala	Gln	Gln	Gln	Pro	Phe	Ser	Ala	Ser	Met	Val	Pro	Thr	Ser		
		260						265					270				
Pro	Thr	Phe	Asn	Leu	Val	Lys	Pro	Ala	Pro	Gln	Gln	Leu	Ser	Pro	Asn		
		275					280					285					
Thr	Ala	Ala	Ile	Gln	Glu	Ile	Gly	Gln	Ser	Ser	Glu	Phe	Lys	Phe	Glu		
		290				295					300						
Asn	Ser	Gln	Val	Lys	Pro	Trp	Glu	Gly	Glu	Arg	Ile	His	Asp	Val	Ala		
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 attgttttga gagttgaagg aagaagatga cgtctgacgg agcaacgctg acgtcagctg 180
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 cagctgcagc agcagcgatg ggcacgagga ggaaaccgtc gtggagagag agggagaaca 240
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<211> 23

<212> DNA

<213> Primer

<400> 13

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<210> 14

<211> 27

<212> DNA

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